Washington State Department of Health

Biomonitoring Data notes

Information About the Data

In 2009, the Centers for Disease Control and Prevention (CDC) awarded the Washington State Department of Health (Department) a five year biomonitoring grant to conduct a statewide general population study, known as the Washington Environmental Biomonitoring Survey (WEBS).

From May 2010 through June 2011, WEBS staff collected 1422 urine samples from a statewide representative sample of Washington residents age six and older. The urine samples were then analyzed at the Department's Public Health Laboratories for speciated (organic and inorganic) and total arsenic, metals, and pesticide metabolites.

Derivation

This display was developed using data from the 2010-2011 Washington Environmental Biomonitoring Survey (WEBS) results. To be able to compare the results a national study, we have also included biomonitoring data from the 2009-2010 and 2011-2012 National Health and Nutritional Examination Survey (NHANES) National Report on Human Exposure to Environmental Chemicals.

The creatinine corrected urinary concentrations are used in this display as they account for differences in urine dilution between sample respondents and allow for easy comparison of results to established health standards. Users who wish to view the non-creatinine corrected results may do so in the data table.

Useful Terminology

- Creatinine corrected concentrations – Creatinine corrected concentrations are used to adjust for variable urine dilution between survey respondents and are measured in units of micrograms per gram (µg/g) of creatinine. Please see the 'Data Table' display to view the creatinine corrected and non-creatinine corrected results in a table format.

- Percentiles – The percentiles (50, 75, 90, 95) refer to the proportion of the sample population that had urinary concentrations of the selected compound that were below a certain level. For example, a 75^{th} percentile urinary concentration of 3.4 µg/L means that 75% of the sample population had urinary concentrations of the selected compound that were below 3.4 µg/L.

- Confidence Intervals – Each percentile calculation includes the corresponding 95% confidence interval, which depicts the range we would expect to contain the population percentile result for the population 95% of the time. A smaller confidence interval indicates that the estimate is more precise.

- Limit of Detection (LOD) – The limit of detection (LOD) reference lines in the display depict the lowest level at which the lab was able to distinguish the presence of the compound from its absence in urine. The LOD for each compound may vary by study and year. (Note: Results less than the LOD are denoted by a gray bar that extends to the LOD reference line in order to help differentiate between missing data and results less than the limit of detection.)

Additional Resources

Major findings from the 2009-2010 WEBS study may be found on the Washington State Department of Health Biomonitoring Program webpage here: https://www.doh.wa.gov/DataandStatisticalReports/EnvironmentalHealth/Biomonitoring/Projects/StatewidePopulation